
Proposed International Spinal Cord Injury Pain (ISCIP) Classification: Preliminary Validation Data

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Background

An international group of spinal cord injury (SCI) and pain experts developed a consensus classification of pain after SCI in 2009-2010, which was reviewed by several professional organizations and named the International Spinal Cord Injury Pain (ISCIP) classification.

Objective

To investigate the interrater reliability of the ISCIP classification as used by physicians and other clinicians who received minimal training in use of the classification.

Participants

Participants included 56 physicians, physical therapists, occupational therapists, and nurses from the United States, Europe, Middle East, Australia, and Southeast Asia, of whom almost half saw 100 or more SCI patients per year and over a third treated over 50 SCI patients per year for pain.

Methods

Members of the ISCIP classification group prepared 75 clinical vignettes (brief case histories); these were assigned to a category of the classification by at least 3 experts who took part in the development of the ISCIP classification. (An example of a vignette is provided in the box, "Vignette Example.") Vignettes were randomly divided into sets of 25 that were incorporated into

3 different versions of a survey distributed using Zoomerang (Market Tools, Inc) to 3 groups of potential participants. Members of 2 SCI-related organizations were randomly selected and invited via e-mail to participate; the members of the ISCIP group also nominated colleagues. For each vignette, these clinicians were asked to decide first on the number of pain components present, then to classify it (or them) by selecting the correct type from a list of combinations of tier 1 and 2 categories, and finally to type in corresponding tier 3 information on pain source, pathology, and/or specific pain syndrome. Selections indicating uncertainty within subtype were available as well.

Results

The mean confidence in the number of components present in the vignette averaged 4.1 (ranging from 1 = *not more than a guess* to 5 = *absolutely certain*). The average respondent had 86% of the questions on number of pain components correct. **Table 1** shows correctness of type (tier 1 and 2) as chosen by the respondents.

Discussion

Respondents were very confident in their choices. Clinicians rarely chose an available selection

Table 1. The International Spinal Cord Injury Pain (ISCIP) classification and the percent of vignettes classified correctly by the type assigned by the expert panel

Tier 1: Pain type	Tier 2: Pain subtype	Tier 3: Primary pain source and/or pathology (write or type in)	Percent correct
Nociceptive pain	Musculoskeletal pain	eg, glenohumeral arthritis, lateral epicondylitis, comminuted femur fracture, quadratus lumborum muscle spasm	84
	Visceral pain	eg, myocardial infarction, abdominal pain due to bowel impaction, cholecystitis	85
	Other nociceptive pain	eg, migraine headache, surgical skin incision	40
	Nociceptive pain (unknown if musculoskeletal or visceral or other)		NR
Neuropathic pain	At-level SCI pain	eg, spinal cord compression, nerve root compression, cauda equina compression	57
	Below-level SCI pain	eg, spinal cord ischemia, spinal cord compression	73
	Other neuropathic pain	eg, carpal tunnel syndrome, trigeminal neuralgia, diabetic polyneuropathy	65
	Neuropathic pain (unknown if at-level or below-level or other)		6
Other pain (syndrome)		eg, fibromyalgia, Complex Regional Pain Syndrome type I, interstitial cystitis, irritable bowel syndrome	29
Unknown pain			NR
Total			65

Note: NR = not represented.

that indicated uncertainty in the diagnosis, even when the vignette could have more than one potential diagnosis. Some subtypes of pain proved challenging to classify, for example, vignettes identifying autonomic dysreflexia headache had poor correctness of type choice, even though nearly all respondents had typed in the correct pain source. There was also frequent disagreement in the classification of abdominal pain after SCI, with some classifying it as visceral (nociceptive) pain even when there was no identifiable source of visceral pathology, while others classified it as below-level or at-level SCI pain. At-level SCI pain in the setting of a cauda equina injury was also frequently misclassified as below-level SCI pain.

Conclusions

The reliability of the use of ISCIP classification is moderate as tested in a sample of physicians and

other clinicians (who received minimal training in use of the classification) using a clinical vignette approach. The ISCIP classification should be tested for reliability with real persons with pain after SCI. Further clarification of how to classify

Vignette Example

A 41-year-old male with a T6 AIS A spinal cord injury for the last 20 years complains of moderate pain of an intensity of 5/10 in the first 3 digits of both hands that has been present for the last 6 months. The pain is constant and is described as an "annoying numbness." On physical exam, he exhibits decreased sensation to touch in the first 3 digits of both hands. Pain of an "electric" quality shoots into his thumb and index finger with percussion over both anterior wrists (ie, (+) Tinel's sign).

subtypes of pain, particularly atypical ones, in the instructional manual accompanying the ISCIP classification is warranted.

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